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ABSTRACT

This evaluation report examines high school programs for high ability students in Orange County, California. The evaluation study used interviews, surveys, and a review of records. It was found that: (1) all high schools have developed a course of study for high ability students, including Advanced Placement, honors, and four magnet programs; (2) all schools have a process for identifying high ability students and directing them to more rigorous academic courses; (3) those schools with course/program analysis systems in place were found to be more fully meeting student needs; (4) most students felt that courses were preparing them adequately for the next level courses; (5) major concerns expressed by administrators and practitioners focused on threats to these programs as a result of reduced funding; (6) almost all schools utilized district-level incentive funds in program development; and (7) the implications of changing demographics have not been fully incorporated into program planning. The report briefly presents the purpose of the evaluation, related district goals, the program description, evaluation questions, and procedures. Most of the report is given to analysis of findings and recommendations for each school. (DB)

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HIGH SCHOOL PROGRAMS FOR HIGH ABILITY STUDENTS

PROGRAM EVALUATION REPORT
June 1992

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HIGH SCHOOL PROGRAMS FOR HIGH ABILITY STUDENTS

Executive Summary

Prepared by Roberta Rodriguez Thomas

June 1992

The purpose for providing high school programs for high ability students is consistent with the purpose for providing programs for all students: courses are developed individually or in a series in order to ensure that a hierarchy of skills necessary for learning is appropriately presented. High ability students in Grades 9-12 are served. The unique population of each high school is taken into consideration in order to develop courses that will meet the needs of all students.

Courses/programs for high ability students for this evaluation included district magnet programs and programs developed for high ability students using districtwide incentive funds, Advanced Placement courses, honors courses, gifted courses, and dual-enrollment courses with institutions of higher learning. Other, more academically challenging courses, offered at the advanced levels in areas such as the arts, foreign languages, and mathematics were addressed. Vocational classes and the shared-time programs provided at the vocational centers were included.

Procedures used in the evaluation consisted of interviews, surveys, and the review of records. Interviews were conducted with program specialists, Assistant Principals for Instruction, and guidance counselors. Surveys were administered to selected high ability students. The High School Enhancement Specialist and the secondary program specialists assisted in advising the program evaluator throughout the evaluation process.

GENERAL CONCLUSION

Each high school in Orange County was found to have developed a course of study for high ability students; almost all high schools reported that the use of district-level incentive funds for this purpose. Some schools have implemented a systematic means of reviewing course information and revising course and program offerings as well as giving consideration to the changing demographics impacting their school. These schools were found to be more fully meeting the needs of high ability students.

All high schools reported a process for identifying and directing high ability students to the more rigorous academic course offerings. Some processes included a continuous means of identifying high ability students through four years of high school while others focused more on a one-time effort to identify rising Grade 9 students. For the most part, students reported that the courses in the various subject areas had prepared them for the next higher offering in the respective area.

The concerns presented by program specialists, Assistant Principals for Instruction, and guidance counselors were directly related to the issue of reduced funding for education. At the district as well as the school level, the interviews reflected forethought and planning regarding how to provide quality instruction and maintain the integrity of all programs given that the funding would be reduced.

EVALUATION QUESTIONS, FINDINGS, AND RECOMMENDATIONS

Seven questions were used to evaluate the high school offerings for high ability students. Each question along with the primary findings and recommendations is included in this section.

1. What classes and programs are available for high ability students in the OCPS high schools?

   Findings

   Each high school in Orange County has developed a course of study for high ability students based on student needs. Offerings for high ability students include Advance Placement, honors, and gifted courses as well as four magnet programs. Some schools have expanded their course offerings into vocational areas and have used alternative resources of community colleges, four-year colleges, and universities. While Jones High School reported offering honors courses, students were not offered Advanced Placement courses, gifted courses, or courses which involved vocational education or institutions of higher learning.

   Recommendations

   Efforts should be taken to provide equity in course and program offerings for high ability students in all high schools. Special efforts should be taken to address the needs of Jones High School as soon as possible.

2. Are the needs of high ability students being met by programs designed for them?

   Findings

   The information provided by program specialists, Assistant Principals for Instruction, and high ability students was used to develop profiles to determine if the courses and programs for high ability students were meeting the needs of the students served. The profiles were also found to help identify which schools have implemented a systematic means of reviewing course information and revising course and program offerings to meet student needs. Schools which implemented a course/program analysis system were Apopka, Colonial, Edgewater, and University high schools. Schools making progress to implement a course/program analysis system were West Orange and Winter Park high schools. These schools were found to be more fully meeting the needs of high ability students.

   Recommendations

   1. Efforts should be taken to assist Boone, Dr. Phillips, Evans, Jones, and Oak Ridge high schools in the implementation of a course/program analysis system to plan for meeting the needs of high ability students. The following Assistant Principals for Instruction have successfully implemented this type of process: H. Jeanne Moore at Apopka High School, Bonnie K. ıg at Colonial High School, Tom Akin at Edgewater High School, and Penny Hirsch at University High School.

   2. The results of the AP and honors examinations should be reviewed giving consideration to the recommendations for improvement made by students.

3. How are students identified and directed toward programs for high ability students, and what processes take place in the high schools to nurture the recognition of student talents in programs for average students?

Findings

Each school reported a process for identifying and directing high ability students to the more rigorous academic course offerings at the high school. Some processes included a continuous means of identifying high ability students through the students' four-year high school career while others focused more on a one-time effort to identify rising Grade 9 students. The more comprehensive programs were reported for Apopka and University high schools. Apopka and University high schools not only reported but were observed to have implemented a comprehensive, schoolwide, and continuous effort by the administration, faculty, and staff to identify high ability students.

Recommendations

1. All high schools should be encouraged to implement comprehensive, schoolwide, and continuous processes to identify and direct high ability students to the appropriate high school programs.

2. The processes implemented at Apopka and University high schools should be considered as models for school improvement efforts for identifying and directing high ability students.

4. How successful are courses for high ability students in preparing students for continued success in these courses?

Findings

At each of the 10 schools for which surveys were returned, three-fourths or more of the students reported that the courses in the various subject areas had prepared them for the next higher offering in the respective course of study. Concerns were reported at eight of the 10 schools. For the concerns reported regarding AP or IB courses, the official results from the AP and IB examinations were not yet available so those data were not used.

Recommendations

1. Efforts should be taken at each school to ensure that courses interface to prepare students for the successive years of instruction in a specific subject area.

2. The AP and IB examination results should be analyzed to address the student concerns reported in this evaluation report.

5. What are the concerns of program specialists and school administrators regarding programs for high ability students?

Findings

The concerns presented by program specialists, Assistant Principals for Instruction, and guidance counselors were directly related to the issue of reduced funding for education. At the district as well as the school level, the interviews reflected forethought and planning regarding how to provide quality instruction and maintain the integrity of all programs given that the funding would be reduced.

Programs and courses for high ability students appear to be more vulnerable than others because schools will not be able to afford to offer these classes unless there is full enrollment, and therefore, the FTE funds generated will have to adequately pay for the course costs. This will affect the magnet courses as well as AP and honors classes.

Recommendations

1. Given the extreme economic limitations impacting all schools, districtwide efforts should be taken to assist and support high schools, individually, in planning and developing high school programs for high ability students.

2. The concerns of program specialists and Assistant Principals for Instruction reported in the results section of this document should be used in planning school assistance and support activities.

3. Alternative approaches for offering courses for high ability students should be explored. Interactive Television for Distance Learning should be considered for smaller schools that cannot afford to offer the classes (e.g., AP courses or calculus at Jones High School) or larger schools where the enrollment for the particular class is low (e.g., Arabic at Dr. Phillips High School).

6. How have incentives for developing programs for high ability students been utilized by district high schools?

Findings

Almost all high schools reported the use of district-level incentive funds to assist in the development and implementation of high school programs for high ability students. Edgewater and Colonial high schools have augmented the incentive funds with grant awards, whereas Oak Ridge and University high schools are very interested in implementing a process for developing and submitting grants. Apopka High School has piloted several state-sponsored projects to continue the incentive to further develop programs which would address the needs of high ability students.

Recommendations

1. Efforts should be taken to assist schools in the acquisition of incentive funds to further develop high school programs for high ability students.

2. Efforts taken at Apopka, Colonial, and Edgewater should be shared and, where appropriate, replicated to assist schools in the acquisition of incentive funds to further develop high school programs for high ability students.

7. With the changing demographics of the student population, what modifications or changes will have to take place to address the needs of OCPS high ability students in the future?

Findings

While most schools are aware of the changing demographics impacting their schools, not all schools have thought through the implications for modification or change that will have to take place to accommodate high ability students or the student population in general.

Recommendations

1. Efforts should be taken to assist schools in monitoring demographic changes in the high school student populations.

2. Assistance should be requested of the Total Quality Management and Strategic Planning Section to develop high school alternative futures related to changing demographics in the student populations and other relevant variables and to plan strategies to address the concerns presented by the alternatives identified.

HIGH SCHOOL PROGRAMS FOR HIGH ABILITY STUDENTS

PURPOSE OF EVALUATION

The purpose for conducting the evaluation of High School Programs for High Ability Students was to identify the program offerings available at each high school and to determine the effectiveness of these programs. In the process of conducting the evaluation, how students were identified for and directed to high school programs for high ability students and the equity in the development of course offerings across the high schools was also investigated.

RELATED DISTRICT GOALS

Goal 1: To enable all students to succeed in school and their chosen careers, to develop positive self-esteem, and to be responsible citizens

Goal 2: To staff schools and district-level departments with quality personnel and improve the job performance and job satisfaction of all employees

Goal 3: To enhance involvement in the educational process and communications among students, staff, parents, the school board, and the community; and to improve multicultural relations district-wide

Goal 4: To improve the learning environment by providing appropriate support services to schools

PROGRAM DESCRIPTION

Legal Basis

A review of the Florida School Code indicated that, in general, programs for high ability students are not mandated by law. However, at 229.59 (1) (e) of the Florida School Code, Educational Improvement Projects, it is cited that educational programs be restructured to address the needs of diverse students. Within the definition of diverse students, the needs of high ability students may be addressed.

One program which is mandated by law and addresses the needs of some high ability students is the program for gifted students. The criteria for admission to the Gifted Program is determined by the Florida Department of Education. The legal basis for the provision of services to gifted students is located at 6A-6.03019 in the Florida Administrative Code (FAC), Special Programs for Students Who Are Gifted. This section defines the gifted student and specifies the eligibility criteria as the following:

1. Gifted. One who has superior intellectual development and is capable of high performance. The mental development of a gifted student is two standard deviations or more above the mean.

2. Criteria for eligibility. A student is eligible for special programs for the gifted if the student demonstrates:

    a. Superior intellectual development - an intelligence quotient of two standard deviations or more above the mean on an individually

administered standardized test of intelligence. The standard error of measurement may be considered in individual cases.

b. A majority of characteristics of gifted children according to a standard scale or checklist.

c. Need for a special program.

The Gifted Program is made available to eligible students at most schools in Orange County. At the high school level, however, students tend to seek services to address their academic needs in course offerings other than gifted. In the evaluation of the Gifted Program which was conducted in the 1989-90 school year, 23% of the high school students who had previously participated in the Gifted Program which included over 100 students at Winter Park High School were no longer participating in gifted classes. At Boone, Colonial, Dr. Phillips, Evans, Jones, Oak Ridge, West Orange, and Winter Park high schools students reported the following reasons for not participating in the gifted program: (a) scheduling conflicts, (b) substituting AP courses for gifted-elective courses to accrue college credits, or (c) course offerings in gifted did not support their areas of strength. During the current school year (1991-92), because of the low numbers of gifted students and the lack of interest in the gifted program course offerings, gifted courses were not offered at Jones High School.

While gifted courses require that each student be intellectually eligible for the gifted program, at the high school level, a different standard is required to participate in other course offerings for high ability students. In the other courses, students must demonstrate their ability to compete in a more academically rigorous class setting. If students cannot demonstrate their commitment and ability to compete, they are not directed to select the more rigorous course offerings. Once enrolled, if students do not demonstrate a commitment and ability to compete, they are counseled to enroll in less academically rigorous courses.

It is advantageous to OCPS students that a menu of courses and programs for high ability students other than gifted be available to them because some very capable students may not meet the intellectual criteria for the gifted program. For example, in the 88-89 school year, one student in the International Baccalaureate Program at Winter Park High School received an IB diploma; this student's academic records reflected that he had been tested for the gifted program, but had not met the eligibility criteria. Fortunately, this student could select from other courses and programs for high ability students.

Currently, the Gifted Program mandated by law and made available at all OCPS high schools to students with an IQ of 130 or above serves a small portion of the high ability student population. Classes other than gifted which require the demonstrated effort on the part of the student and evidence of success, instead of an IQ score, are serving the majority of high ability students in the OCPS high schools.

Purpose

Programs for students with high ability are part of the continuum of services offered at each school. At the high school level, because courses are discrete entities, courses are developed individually or in a series in order to ensure that a hierarchy of skills necessary for learning is appropriately presented. The unique population of each high school is taken into consideration in order to develop courses that will meet the needs of all students.

Program Personnel

District level. At the district level, the Secondary Education Directors, the Secondary Education Enhancement Specialist, and the Secondary Education Program Specialists are responsible for assisting in the development, maintenance, improvement, and continued support to programs for high ability students.

School level. School-level support is provided under the leadership of the school principal. Working collaboratively with the school administration, teachers contribute to efforts for the development, maintenance, improvement, and continued support to programs for high ability students.

EVALUATION QUESTIONS

The evaluation questions were developed in accordance with policies established in the Comprehensive Plan for Program Evaluation (OCPS, 1988), a district-developed series of planning activities, guidelines, and timelines for effective district program evaluations. The steps were as follows:

1. The evaluator became familiar with the literature relative to the program via the Educational Resources Information Center (ERIC), the Educational Research Service Incorporated (ERS), and information provided by the High School Enhancement Specialist.

2. Next, the evaluator discussed issues for investigation with the Associate Superintendent for Secondary Education, the High School Enhancement Specialist, and the district-wide instructional program specialists providing services to the high schools.

3. From the information gathered, the evaluator drafted a set of evaluation questions which were discussed with the associate superintendent and the enhancement specialist.

4. Revisions, additions, and deletions were made, and the resulting evaluation questions were submitted to the superintendent and his administrative staff for examination. Following their approval, the questions were finalized.

The following evaluation questions were used to guide the evaluation:

1. What classes and programs are available for high ability students in the OCPS high schools?

2. Are the needs of high ability students being met by programs designed for them?

3. How are students identified and directed toward programs for high ability students, and what processes take place in the high schools to nurture the recognition of student talents in programs for average students?

4. How successful are courses for high ability students in preparing students for continued success in these courses?

5. What are the concerns of program specialists and school administrators regarding programs for high ability students?

6. How have incentives for developing programs for high ability students been utilized by district high schools?

7. With the changing demographics of the student population, what modifications or changes will have to take place to address the needs of OCPS high ability students in the future?

PROCEDURES

To prepare for this evaluation, the program evaluator conducted literature reviews and reviewed statutes, rules, and regulations pertaining to the provision of high school programs for high ability students. The issues pertinent to the evaluation were discussed with the Associate Superintendent for Secondary Education, the High School Enhancement Specialist, and the district-wide instructional program specialists providing services to the high schools.

The means used to conduct this evaluation were implemented according to the evaluation design developed in August, 1991. The design addressed gathering evaluation data using interviews, surveys, and a review of records. For the most part, the format used to report the data is by school with the intention of placing less emphasis on the comparison of programs across schools. In the process of the evaluation, schools were treated as unique communities drawing on resources to meet the needs of their unique populations; therefore, comparisons across schools were not intended.

Interviews

Program specialist interviews. Interviews were conducted with the 13 program specialists who described existing courses for high ability students in their subject areas. Courses were reported, in alphabetical order, for the following areas: agriculture; art; business education; executive internship; foreign languages; gifted; library media, literature, language, communications, drama, humanities; mathematics; science; social studies; and technology education/industrial education.

The interview contained two parts. In the first part, which took place prior to the actual interview activity, the program specialist was asked to complete a grid by listing the courses for high ability high school students and identifying the high schools where the courses were offered. In the second part, the program specialist responded to questions regarding (a) whether or not they felt the courses were meeting student needs, (b) how they work to develop courses, (c) their concerns regarding the course offerings, and (d) predictions regarding future program needs. This interview was conducted in December, 1991.

Assistant principal for instruction (API) and guidance counselor interviews. Interviews were conducted jointly with the API and guidance counselor at each of the 11 high schools that were identified in the program specialist interviews. Courses were not identified for Wymore Career Education Center; therefore, Wymore was not included in this interview process.

The API/guidance counselor interview also contained two parts. In the first part, the courses listed by the program specialist were reviewed for confirmation from the API and guidance counselor. The second part addressed (a) prioritizing the subject areas in determining whether or not they met student needs, (b) identifying and directing students to enroll in the courses, (c) district and school-level support for developing programs, (d) advertising and communicating programs to students, (e) strategic planning for programs, (f) exemplary programs in other districts, and (g) concerns regarding current programs. This interview was conducted in January and February, 1992.

Student surveys. Ten Grade 12 students from each of the 11 high schools were surveyed. The survey was conducted in May in order to allow the students to reflect on their previous three years and most of their senior year of high school. In the survey, the students were asked (a) to identify the course areas in which they had participated, (b) to state how they were initially advised to enroll in the courses, (c) to determine if the course met their needs, (d) to describe how they had been encouraged to discover and develop new areas of giftedness or talents, (e) to state their future plans and how school personnel had assisted them in developing their plans, and (f) to address their concerns.

Review of records. Records were reviewed to determine the inclusion of minority students in the courses and programs investigated in this evaluation.

RESULTS, CONCLUSIONS, AND RECOMMENDATIONS

Evaluation Question 1

What classes and programs are available for high ability students in the OCPS high schools?

Results

Interviews were conducted at each high school to investigate which courses and which programs were available to high ability students. The assistant principal for instruction along with the guidance chairperson provided information in the interview setting. The resulting profiles reflect the school-level interpretation of courses and programs for high ability students.

Apopka High School

Many learning opportunities are available to high ability students at Apopka High School. Advanced Placement (AP) courses are offered in art (general portfolio and drawing portfolio), foreign languages (Spanish and French), English (literature/composition), mathematics (calculus AB), computer programming, music theory, sciences (biology and physics B), and social studies (United States history). Honors classes are offered in English (I-IV); mathematics (algebra I, geometry, and algebra II); sciences (biology I, anatomy and physiology, earth and space science, chemistry I, and physics); and social studies (world history, American history, economics, and American government). Pre-honors classes are offered to rising Grade 10 students who are recommended by their Grade 9 teachers to participate in this summer program; these students are enrolled in English and History classes which will help them to transition to the rigor of honors classes in the fall of their Grade 10 year. Gifted courses are offered in English, and the Gifted Studies elective course is also offered. Dual enrollment classes with Valencia Community College (VCC) are offered in career development through the Executive Internship Program, introduction to humanities, mathematics (algebra and trigonometry), and social studies (economics, general psychology, and sociology). Dual enrollment with Rollins college is offered through the Florida Interacademic Consortium (FLIC) for English.

Other challenging courses make up the complement to the courses for high ability students previously listed. Although they are not assigned a title which connotes rigor and academic excellence, they may be equally as challenging as those bearing the AP, honors, or dual-enrollment labels. At Apopka, these courses include art (Drawing III,

photography III, computer graphics, and three-dimensional composition); the Executive Internship Program; foreign languages (Spanish III-IV, French III-IV, German III-IV, and Latin III-IV); humanities (I-II); drama (III-IV); debate (I-II); mathematics (trigonometry, analytic geometry, and calculus); computer programming (II-III); and music (jazz band, orchestra, and chorus). Leadership skills (II-IV) are taught through the ROTC program. A Scholastic Aptitude Test (SAT) preparation course is also offered.

Vocationally, Apopka High School offers courses in agriculture (agriculture mechanics II, horticultural science, and agricultural education directed studies); business education (accounting I-II, business computer applications I-II, and word processing); home economics and health occupation careers (child care II-III and health services/health occupations); and technology education/industrial education (general studies in technology, principles of drafting technology, principals of graphic communications technology systems, automotive mechanics, and computer programming II-III). To expand on the vocational offerings and to infuse the practical application of academic principles into the learning process, Apopka High School worked cooperatively with the Florida Department of Education to implement the pilot Blueprint School and Tech-Prep programs. Course offerings include laser optics and robotics. These courses introduce students to the world of work and assist them in furthering their education in similar fields of study at the post-high-school level.

Boone High School

At Boone High School, Advanced Placement (AP) courses are offered in art (general portfolio), English (language/composition and literature/composition), mathematics (calculus AB), science (physics B), and social studies (US history and European history). Honors classes are offered in English (I-IV); mathematics (algebra I, geometry,and algebra II); sciences (biology I, anatomy and physiology, earth science, chemistry I, and physics I); and social studies (world history, American history, and American government). Gifted courses are offered in English, and the gifted studies elective course is also offered. The SAT preparation course is provided within gifted studies. Dual enrollment classes with Valencia Community College (VCC) are offered in career development through the Executive Internship Program, mathematics (algebra and trigonometry), and social studies (economics).

Other challenging courses make up the complement to the courses for high ability students previously listed. Although they are not assigned a title which connotes rigor and academic excellence, they may be equally as challenging as those bearing the AP, honors, or dual-enrollment labels. These courses include art (drawing III and painting III); the Executive Internship Program; foreign languages (Spanish III-V, French III-V, German III-IV, and Latin III-IV); humanities (I-II); drama (III-IV); journalism (III-IV); debate (I); creative writing; mathematics (trigonometry, analytic geometry, and pre-calculus); music theory; sciences (oceanography/marine biology and botany/zoology). Vocational offerings for high ability students are addressed in the areas of business education (accounting, business computer applications, business management law, and word processing) and technology education/industrial education (principles of drafting, principles of graphic communications technology systems, principles of energy and power technology systems, and computer programming basic I-II, Pascal, and Fortran). Television production classes are offered through library media services.

The B.E.Y.O.N.D. (Boone Education Yields Outstanding New Dividends) program was implemented in the 1990-91 school year to address the needs of academically talented students in the Boone community. For the most part, students in the B.E.Y.O.N.D. program participate in individual academic classes which collectively prepare them for advanced studies in institutions of higher learning. Information gleaned from the interview indicates that the B.E.Y.O.N.D. curriculum is not integrated across the disciplines, but efforts to integrate the curriculum are planned.

Colonial High School

At Colonial High School, Advanced Placement (AP) courses are offered in art (general portfolio and drawing portfolio), computer programming, foreign languages (Spanish), English (literature/composition), mathematics (calculus AB), science (biology), social studies (US history and European history). Honors classes are offered in English (I-IV); mathematics (algebra I, geometry, and algebra II); sciences (biology I, anatomy and physiology, earth and space science, chemistry I, and physics I); and social studies (world history, American history, and American government). Gifted courses are offered in English and physics. Dual enrollment classes with Valencia Community College (VCC) are offered in career development through the Executive Internship Program, introduction to humanities, mathematics (algebra and trigonometry), and social studies (economics and general psychology).

Other challenging courses make up the complement to the courses for high ability students previously listed. Although they are not assigned a title which connotes rigor and academic excellence, they may be equally as challenging as those bearing the AP, honors, or dual-enrollment labels. These courses include art (portfolio, drawing III, painting III, and printmaking II); the Executive Internship Program; foreign languages (Spanish III-IV, French III-IV, German III-IV, and Latin III-IV); humanities (I); debate (I-II); drama (III-IV); creative writing; advanced reading; journalism (III-IV); mathematics (trigonometry, analytic geometry, integrated math, and calculus); music (jazz III-IV and band III-IV); and science (chemistry II).

The Colonial Academic Scholars Program (CASP) was developed to assist high ability students through their high school careers. This program along with the Teachers as Advisors Program assists in the identification of high ability students, builds parent support and advocacy for academic excellence, and provides continual guidance and counseling through the mentoring of high achieving students.

Vocational offerings for high ability students are addressed in the areas of agriculture (agriculture science foundations and horticultural science); business education (accounting, business computer applications, desktop publishing, word processing, and business computer programming); technology education/industrial education (principles of drafting technology, drafting II, drafting independent study, auto mechanics V-VI, and auto body); and home economics (childcare III and food production III). Television production classes are offered through library media services.

Colonial High School is the site of the vocational magnet for animal husbandry. Courses are offered in animal science (I-II) and agricultural education directed studies.

In the area of physical education, Colonial reported one course for the high ability student: the care and prevention of athletic injuries. For students to "embrace an appreciation for physical development" was reported to be important.

Dr. Phillips High School

At Dr. Phillips High School, Advanced Placement (AP) courses are offered in art (general portfolio and drawing portfolio), foreign languages (Spanish and French), English (literature/composition), mathematics (calculus AB and BC), sciences (biology and chemistry), and social studies (US history and European history). Honors classes are offered in English (I-IV); mathematics (algebra I; geometry, and algebra II); sciences (biology I, anatomy and physiology, earth and space science, chemistry I, and physics I); and social studies (world history, American history, economics, and American government. Gifted courses are offered in English, and the Gifted Studies elective course is also offered. Dual enrollment classes with Valencia Community College (VCC) are offered in career development through the Executive Internship Program and social studies (general psychology, economics, and sociology).

Other challenging courses make up the complement to the courses for high ability students previously listed. Although they are not assigned a title which connotes rigor and academic excellence, they may be equally as challenging as those bearing the AP, honors, or dual-enrollment labels These courses include art (portfolio, drawing III, and computer graphics); foreign languages (German III, Latin III, Russian, and Japanese); humanities (I-II) and unified arts; mathematics (trigonometry, analytical geometry, pre-calculus, and calculus); and the Executive Internship Program. Vocational courses are offered in agriculture (agriculture technology II and agricultural education directed studies); business education (accounting, business computer applications, desktop publishing, word processing, and business management and law); and technology education/industrial education (principles of drafting technology, principles of electronics technology, principles of graphic communications technology systems, and practical digital electronics). Television production classes are offered through library media services. Although music courses for high ability students were not reported, students who demonstrate high achievement in music are channeled into music performance classes. To augment the vocational offerings at Dr. Phillips High School, the shared-time program with the Mid-Florida and Westside vocational technical centers is offered.

For the most part, students participate in individual academic classes at Dr. Phillips High School which collectively prepare them for advanced studies in institutions of higher learning. Information gleaned from the interview setting indicates that efforts have been taken to strengthen the mathematics and sciences into an integrated instructional block; additional efforts to integrate the courses across academic disciplines were not reported.

The Center for International Studies is recognized by the school district as the magnet program for high ability students interested in the integration of social studies, foreign languages, and international business. A 3.0 grade-point average and demonstrated effort is required as part of the admission criteria to the center.

Edgewater High School

For high ability students, the Edgewater curriculum offers Advanced Placement (AP) classes, honors classes, challenging classes specially designed for the high ability student population (e.g. the Gifted Studies class), as well as interdisciplinary-integrated and magnet programs. Advanced Placement (AP) classes are offered in art (portfolio); foreign languages (Spanish and German); English (literature/composition); mathematics (calculus AB and BC); sciences (biology, chemistry, and physics B); social studies (US history and European history); and computers. Pre-AP courses which prepare students to participate in the AP classes are offered for English, mathematics, sciences, social studies, and computers. Honors classes are offered in word processing; English (I-IV);

mathematics (algebra I, geometry, and algebra II); sciences (biology I, anatomy and physiology, earth and space science, chemistry I, environmental engineering, and physics I); and social studies (world history, American history, and American government). Gifted courses are offered in English, and the Gifted Studies elective course is also offered. A dual enrollment class with Valencia Community College (VCC) is offered in career development through the Executive Internship Program, and, for the magnet students, the University of Central Florida offers systems modeling and engineering analysis.

Other challenging courses make up the complement to the courses for high ability students previously listed. Although they are not assigned a title which connotes rigor and academic excellence, they may be equally as challenging as those bearing the AP, honors, or dual-enrollment labels. These courses include foreign languages (Spanish III-IV, French III-IV, Latin III-IV, and German III-IV); humanities (I-II); debate (I-IV); journalism (II-IV); art (portfolio, ceramics III and IV, and computer graphics); the Executive Internship Program; mathematics (trigonometry, analytic geometry, and pre-calculus); sciences (marine biology and space technology engineering); and introduction to engineering. Vocational offerings for high ability students are addressed in the areas of business education (accounting, business computer applications, desktop publishing, and word processing) and technology education/industrial education (principles of drafting). Television production classes are offered through library media services. Although music courses for high ability students were not reported, students who demonstrate high achievement in music are channeled into music performance classes (i.e., chorus and band).

For the most part, high ability students at Edgewater High School participate in academic classes integrated across the disciplines or synchronized in their progression of difficulty. As a program of study, these courses prepare students for advanced studies in institutions of higher learning. Information gleaned from the interview setting indicates that recent efforts have been taken to integrate word processing with English; sociological aspects of exceptional education with English; social studies with English and computer science; and mathematics, science, English, and social studies. Many of the interdisciplinary-integrated offerings are conceived at the teacher level and developed with funds received through grant-writing team efforts.

The Engineering and Science Technology magnet is recognized by the school district as the magnet program for high ability students interested in engineering studies which reflects the integration of sciences, mathematics, and computers. A 3.0 grade-point average and demonstrated effort are required as part of the admission criteria for this program.

Evans High School

The Evans High School curriculum offers a variety of courses for high ability students. Advanced Placement (AP) courses are offered in foreign languages (Spanish and French), English (literature/composition), mathematics (calculus AB and calculus BC), science (physics B), and social studies (US history and European history). Honors courses are offered in English (I-IV); mathematics (algebra I, geometry, and algebra II); sciences (biology I, anatomy and physiology, chemistry I, and physics I); and social studies (world history, American History, economics, and American government). Gifted courses are offered in English, and the Gifted Studies elective course is also offered. A dual enrollment class with Valencia Community College (VCC) is offered in career development through the Executive Internship Program and in social studies (general psychology and sociology). Dual enrollment with Rollins college is offered through the Florida Interacademic Consortium (FLIC) for English, chemistry, and physics.

Other challenging courses make up the complement to the courses for high ability students previously listed. Although they are not assigned a title which connotes rigor and academic excellence, they may be equally as challenging as those bearing the AP, honors, or dual-enrollment labels. These courses include art (portfolio, drawing III, photo III, and painting III); the Executive Internship Program; foreign languages (Spanish III-IV, French III-IV, and Latin III); humanities (I-II); debate (I-II); drama (III-IV); mathematics (trigonometry, analytic geometry, pre-calculus, and calculus); and music (jazz band, orchestra, ensembles, and piano keyboarding III). Vocational offerings for high ability students are addressed in the areas of business education (accounting, business computer applications, desktop publishing, and word processing) and technology education/industrial education (general studies in technology and principles of drafting). Television production classes are offered through library media services.

For the most part, students participate in individual academic classes at Evans High School. These classes assist in preparing students for advanced studies in institutions of higher learning.

Jones High School

Advanced Placement (AP) and gifted classes are not offered at Jones High School. Honors classes are offered in English (I-IV); mathematics (algebra I, geometry, and algebra II); sciences (biology I, anatomy and physiology, earth and space science, chemistry I, and physics I); and social studies (world history, American history, economics, and American government). A dual-enrollment class with Valencia Community College (VCC) is offered in career development through the Executive Internship Program.

Other challenging courses make up the complement to the courses for high ability students previously listed. Although their title does not connote honors, or dual-enrollment status, they may be equally as challenging. These courses include foreign languages such as Spanish (II-III) and French (II-IV); mathematics such as trigonometry and analytical geometry; and the Executive Internship Program. Classes in agriculture, art, business education, television production, music, and technological education/industrial education were not reported for high ability students at Jones High School.

For the most part, students participate in individual academic classes at Jones High School. These classes assist in preparing students for advanced studies in institutions of higher learning.

Oak Ridge High School

At Oak Ridge, Advanced Placement (AP) courses are offered in art (general portfolio), foreign language (Spanish), English (language/composition and literature/composition), mathematics (calculus AB), social studies (US history and European history), and computers. Honors courses are offered in English (I-IV); mathematics (algebra I, geometry, and algebra II); sciences (biology I, anatomy and physiology, earth and space science, chemistry I, and physics I); and social studies (world history, American history, economics, and American government). Gifted courses are offered in English (I-IV). A dual-enrollment class with Valencia Community College (VCC) is offered in career development through the Executive Internship Program and social studies (economics).

Other challenging courses make up the complement to the courses for high ability students previously listed. Although they are not assigned a title which connotes rigor and academic excellence, they may be equally as challenging as those bearing the AP, honors, or dual-enrollment labels. These courses include art (portfolio, drawing III, and photography III, ceramics III, and jewelry II-III); the Executive Internship Program; foreign languages (Spanish III-IV, French III-IV, German III-IV, and Latin III-IV); humanities (I-II), drama (III); stage craft; journalism dimensions; speech (II-III); creative writing (II); mathematics (trigonometry, analytic geometry, pre-calculus, and calculus); music (jazz band and chorus ensembles); and science (marine biology). Vocational offerings for high ability students are addressed in the areas of agriculture (horticultural science and agricultural education directed studies); business education (accounting, business computer applications, word processing, and desktop publishing) and technology education/industrial education (principles of drafting and principles of electronics. Television production classes are offered through library media services.

The Meritorious Academic Program for Pioneers (MAPP) was implemented in the 1991-92 school year to address the needs of academically talented students in the Oak Ridge community. For the most part, students in MAPP participate in individual academic classes which collectively prepare them for advanced studies in institutions of higher learning. Information gleaned from the interview indicates that the MAPP curriculum is not integrated across the disciplines, but efforts to integrate the curriculum are being planned.

West Orange High School

At West Orange High School, Advanced Placement (AP) courses are offered in art (art history), foreign languages (Spanish and French), English (language/composition and literature composition), mathematics (calculus AB), sciences (physics B, biology, and chemistry), and social studies (US history and European history). Honors courses are offered in English (I-IV); mathematics (algebra I, geometry, and algebra II); sciences (biology I, anatomy and physiology, earth and space science, chemistry I, and physics); and social studies (world history, American history, economics, and American government). Gifted courses are offered in English, world history, and American history; the gifted studies elective course is also offered. A dual enrollment class with Valencia Community College (VCC) is offered in career development through the Executive Internship Program; dual enrollment with Rollins College is offered through the Florida Interacademic Consortium (FLIC) for English.

Other challenging courses make up the complement to the courses for high ability students previously listed. Although their title does not convey AP, honors, or dual-enrollment status, they may be equally as challenging. These courses include art (portfolio, ceramics III, drawing III, painting III, computer graphics, and art history); the Executive Internship Program; foreign languages (Spanish III-IV, French III-IV, and Latin III-IV); humanities (I-II); debate (III); journalism (III-IV); drama (III-IV); critical thinking skills (III); mathematics (trigonometry, analytic geometry, pre-calculus, calculus, and probability and statistics); and science (physics I). Leadership skills (I-II) are taught through the social studies department, and a Scholastic Aptitude Test (SAT) and American College Test (ACT) preparation course is also offered.

Vocational offerings for high ability students are addressed in the areas of agriculture (horticultural science III, animal science III, agricultural mechanics III, the agribusiness cooperative, and agricultural education directed studies); business education (accounting, desktop publishing, business computer applications, business management and law, computer programming III, Fortran, Pascal, and Cobol); home economics (child care III); technology education/industrial education (principles of drafting technology,

principals of electronics technology, principles of graphic communications technology systems, graphics III, and automotive mechanics). To augment the vocational offerings at West Orange High School, the shared-time program with Westside vocational technical center is offered. Television production (III-IV) classes are offered through library media services.

In the area of physical education, West Orange reported several courses for the high ability student. Advanced weight training, comprehensive fitness, advanced aerobics, and care and prevention of athletic injuries were the courses reported.

Winter Park High School

For high ability students attending Winter Park High School, Advanced Placement (AP) courses are offered in art (general portfolio and drawing portfolio); foreign language (Spanish); English (literature/composition); mathematics (calculus AB and BC); music (theory and literature); sciences (biology, chemistry, and physics); and social studies (US history and European history). Honors courses are offered in English (I-IV); mathematics (algebra I, geometry, and algebra II); sciences (biology I, anatomy and physiology, earth and space science, chemistry I, and physics I); and social studies (world history and American history). Gifted courses are offered in English (I-IV), American history, geography, and contemporary history. A dual-enrollment class with Valencia Community College (VCC) is offered in career development through the Executive Internship Program, in mathematics (algebra and trigonometry), and social studies (economics).

The International Baccalaureate (IB) Program, a district-wide magnet program, is the most rigorous course of study at Winter Park High School. IB courses are offered in foreign languages (Spanish, Russian, and French); English (III-IV); mathematics (trigonometry, analytic geometry, and mathematics studies I-II); sciences (biology II and physics III); and social studies (history of the Americas, psychology I and II, and contemporary history). Pre-IB courses are offered in inquiry skills, English (I-II), sciences (biology I and chemistry I), and social studies (world history). Courses in the IB program are integrated across disciplines as outlined in the curriculum syllabi.

Other challenging courses make up the complement to the courses for high ability students previously listed. Although their title does not convey AP, honors, or dual-enrollment status, they may be equally as challenging. These courses include art (portfolio); the Executive Internship Program, foreign languages (Russian III-IV, Spanish III-IV, French III-IV, German III-IV, and Latin III-IV); humanities (I-II); debate (I-IV); journalism (III-IV); mathematics (trigonometry, analytic geometry, pre-calculus, and analysis of function). Vocational offerings for high ability students are addressed in the areas of business education (accounting, desktop publishing, word processing, and business management and law); technology education/industrial education (principles of drafting I-III, principles of graphic communications technology systems I-III, and principles of engineering technology I-III); and electronics training through the Winter Park Adult Vocational Center. Television production classes are offered through library media services.

University High School

Since its beginning in the fall, 1990, University High School has implemented processes for identifying, mentoring, and promoting high achieving students. Course offerings reflect the special attention given to prescribing for student needs. Advanced Placement (AP) courses are offered in art (general portfolio and drawing portfolio), foreign language (Spanish), English (literature/composition), mathematics (calculus AB), sciences

(biology and chemistry), and social studies (US history and European history). Honors courses are offered in English (I-IV); mathematics (algebra I, geometry, and algebra II); sciences (biology I, anatomy and physiology, earth and space science, chemistry I, and physics I); and social studies (world history, American history, and American Government). Gifted courses are offered in English and world history. A dual enrollment class with Valencia Community College (VCC) is offered in career development through the Executive Internship Program.

Other challenging courses make up the complement to the courses for high ability students previously listed. Although they are not assigned a title which connotes rigor and academic excellence, they may be equally as challenging as those bearing the AP, honors, or dual-enrollment labels. These courses include art (portfolio, drawing III, photo III, and ceramics III); the Executive Internship Program; foreign languages (Spanish III-IV, Spanish for native speakers II-III, French III-IV, German III-IV, and Latin III-IV); humanities (I-II); debate (II-III); speech (III); journalism (III-IV); critical thinking skills; drama (III-IV); mathematics (trigonometry, analytic geometry, algebra II, and probability and statistics); music (band III-IV, chorus III-IV, and girl's and jazz ensembles); stage craft (I-II); and science (chemcom chemistry). Vocational offerings for high ability students are addressed in the areas of agriculture (horticultural science, forest eco-systems, forest and natural resources, and agriculture education directed studies); business education (accounting, business computer applications, and word processing); and technology education/industrial education (principles of drafting technology I-III, principles of graphic communications technology systems I-III, and principles of production systems technology III). Television production classes are offered through library media services. Leadership skills are taught through the ROTC program and for members of the student council.

The Universal Scholars Program was developed to assist high ability students through their high school careers. This program along with the Teachers as Advisors Program assists in the identification of high ability students, builds parent support and advocacy for academic excellence, and provides continual guidance and counseling through the mentoring of high achieving students. A formal contractual agreement among the school, the student, and the parent is the foundation of the Universal Scholars Program; it represents a longitudinal commitment of the three parties to strive for academic excellence. This program provides for a transition from high school to opportunities for higher learning.

Conclusions

Each high school in Orange County has developed a course of study for high ability students based on student needs. Offerings for high ability students include Advanced Placement (AP), honors, and gifted courses as well as the four magnet programs: the Animal Husbandry Center at Colonial High School, the Center for International Studies at Dr. Phillips High School, the Engineering and Science Technology Program at Edgewater High School, and the International Baccalaureate Program at Winter Park High School. Some schools have expanded their course offerings into vocational areas and have used alternative resources of community colleges, four-year colleges, and universities. The following table describes the courses and programs offered at each high school.

Courses and Program Offerings for High Ability Students by High School

School	Number of AP Courses	Number of Honors Courses	Gifted Program	Vocational Involvement	College Involvement
Apopka	11	16[a]	yes	yes	yes
Boone	7	15	yes	yes	yes
Colonial	9	15	yes	yes	yes
Dr. Phillips	11	16	yes	yes	yes
Edgewater	12	17[a]	yes	yes	yes
Evans	8	15	yes	yes	yes
Jones		16	no	no	no
Oak Ridge	8	16	yes	yes	yes
University	9	15	yes	yes	no
West Orange	11	16	yes	yes	yes
Winter Park	13	15[a]	yes	yes	yes

[a] These schools offer pre-AP or pre-IB courses to facilitate the transition of the student into the more rigorous AP and IB courses.

Recommendations

Efforts should be taken to provide equity in course and program offerings for high ability students in all high schools. Special efforts should be taken to address the needs of Jones High School as soon as possible.

Evaluation Question 2

Are the needs of high ability students being met by programs designed for them?

Results

Information was gleaned from three sources to determine if the needs of high ability students were being met by the programs designed for them. The program specialist interviews provided a more centralized view in that the specialists work with all high schools and assist through the initial planning to the implementation phase for courses or programs in their subject area. Program specialists also were able to articulate the necessary linkages between their subject area and the world of work drawing on their knowledge of technology and other recent advancements. This is of particular importance when making the determination of whether or not a program is meeting student needs.

The Assistant Principal for Instruction (API) and guidance counselor interview provided one view of the offerings from the school perspective. In this interview, APIs and guidance counselors collaborated to rank the level of effectiveness of the subject areas to meet the needs of high ability students. They indicated that the course offerings fully met student needs, partially met student needs, or did not meet student needs.

Another perspective regarding the effectiveness of the subject areas in meeting the needs of high ability students, was that of the high ability student. High ability students were surveyed at each high school. Results were not reported for Boone High School.

With information drawn from the three sources, the effectiveness of the subject areas to meet the needs of students was described. Individual descriptions of the schools are presented in the following.

Apopka High School

Assistant Principal for Instruction/Guidance Counselor interview. At Apopka High School, the API and guidance counselor reported having fully met the needs of high ability students in the subject areas of art; foreign languages; literature, language, communications, drama, and humanities; music; science; technology education; computer education; health and medical occupations; home economics; and ROTC. Subject areas reported as partially meeting the needs of students were agriculture, business education, the Executive Internship Program, mathematics, and social studies. TV production was not offered at Apopka; therefore, this subject area (i.e., library media services) was reported as not meeting the needs of the high ability students. The Blueprint School and Tech Prep Laboratories as well as the pre-honors program were rated as fully meeting the needs of the high ability students served.

Continuous planning efforts to improve the curriculum for all students including high ability students at Apopka High School were reported. These efforts are led by the school administration.

Student surveys. The curriculum needs of high ability students were reported to be met by almost all of the Apopka High School students surveyed. Individual student concerns addressed specifics about how courses could be improved to meet student needs. For AP American History, one student reported that more emphasis needed to be placed on the analysis and synthesis of what was read through classroom discussion rather than having the primary emphasis placed on completing assignments; another student reported that the teacher needed to be better prepared to teach AP history. An American Government student reported the need for student performance to be assessed based on individual performance and not on first impressions. For AP English, a student reported that less time needed to be spent on busy work and that more time needed to be spent on classroom discussions or "in-depth looks into literary works"; another student reported little if any new learning taking place in the AP English class.

For the computer classes, one student reported that more time needed to be spent explaining procedures and that more of the material needed to be teacher directed and not self-taught (computer programming); however, another student reported the class to be too basic and that less time needed to be spent on "log on" procedures (computer science). A third student reported that the teacher needed to be better prepared to teach the AP computer science class. For foreign languages, one student who studied French reported the need to focus on communication skills and less on vocabulary and sentence structure; another student who studied Spanish recommended that the teacher be better prepared.

Regarding the Chemistry Honors class, a student reported that although a teacher understands the subject matter, the teacher may not know how to adequately explain it. This student recommended that the teacher focus on improving the explanations provided. This student also recommended that the Trigonometry/Analytic Geometry Honors teacher be more patient, maintain a constant pace of instruction, and not formally test students until they are thoroughly familiar with the material. For the humanities class, one student recommended that the teacher be more consistent in instruction. For the Drama IV class, a student reported the equipment as "lacking" and referred to this in relation to the Universal Studio Video Project.

When students were asked "Were there high school classes for high ability students that you wanted to take that were not available to you?" four of the twelve Apopka students surveyed indicated "yes." One student reported a previous interest in taking AP biology and reported not taking the course because of a schedule conflict. Another student reported not being able to take physics honors for the same reason. A third student reported a previous interest in taking AP music theory; the reason this student reported for not taking music theory was low enrollment. The fourth student reported not being able to take debate IV because of budget cuts.

Program specialist interview. The program specialist reports about the courses offered at each school were compared with the information provided at the school level. Although it was reported by the program specialist that Gifted English and Gifted studies were being offered at Apopka High School, this was not substantiated in the counselor/API interview. It was implied in the interview that the needs of gifted students regarding gifted instruction were partially met and that a gifted resource program needed to be developed. It was confirmed that the television production class was not offered and that the needs for students in this area were not being met.

Boone High School

Assistant Principal for Instruction/Guidance Counselor interview. At Boone High School, the API and guidance counselor reported having fully met the needs of high ability students in the subject areas of business education; the executive internship program; gifted; literature, language, communications, drama, and humanities; mathematics; social studies, and television production. Subject areas reported as partially to fully meeting the needs of students were foreign languages, music, and science. Subject areas reported as partially meeting the needs of students were art and technology education/industrial education. Courses in agriculture are not offered at Boone High School.

Planning efforts to implement the BEYOND (Boone Education Yields Outstanding New Dividends) Program at Boone were reported. Students involved in the BEYOND Program are provided a rigorous course of study; the courses were not found to be integrated to provide an academic continuum. Because BEYOND is a relatively new program, the evaluator did not feel that the effectiveness of the program should be evaluated.

Student surveys. Student surveys were not returned from Boone High School.

Program specialist interview. The program specialist reports about the courses offered at each school were compared with the information provided at the school level. For the courses offered at Boone High School, the program specialists reported the needs of students to be met.

Colonial High School

Assistant Principal for Instruction/Guidance Counselor interview. At Colonial High School, the API and guidance counselor reported having fully met the needs of high ability students in the subject areas of agriculture, the executive internship program, and music. Subject areas reported as partially meeting the needs of students were art; business education; gifted; literature, language, communications, drama, and humanities; television production; mathematics; science; social studies; technology education/industrial education; and home economics. Foreign languages was the only subject area reported as not meeting the needs of high ability students; Colonial High School reported not having a language laboratory.

The district magnet for animal husbandry is located at Colonial High School. This program was rated by the API and guidance counselor as fully meeting the needs of the high ability students served.

Student surveys. The curriculum needs of high ability students were reported to be met by almost all of the Colonial High School students surveyed. Individual student concerns addressed specifics about how courses could be improved to meet student needs. For English, one student recommended greater emphasis be placed on grammar and vocabulary. Another student reported about the method used to teach AP Biology and recommended (a) that the amount of instructional time and the amount of information to be learned be better synchronized to achieve comprehensive coverage of course information, (b) that more interim tests be given to inform the student and the teacher of student progress, and (c) that labs be more organized and focused. For American History, one student recommended that more time be spent in covering the material and that more of the material be covered. In Spanish II, a student recommended spending more time in conversational Spanish in order for students to be prepared for the verbal interaction required in Spanish III.

Three students reported guidance-related recommendations. One student reported the need to better identify students for higher level foreign language classes in that teachers "give up" when students are placed in a class that is too difficult. One student recommended early communication about the course path to take in order to acquire the most knowledge in mathematics. Another student recommended early communication about the course path to take regarding art.

When students were asked "Were there high school classes for high ability students that you wanted to take that were not available to you?" two of the ten Colonial students surveyed indicated "yes." One student reported a previous interest in taking AP chemistry and speculated that the reason it was not offered was related to budget concerns; another student reported a previous interest in taking computer engineering classes and indicated not knowing why the class was not available.

Program specialist interview. The program specialist reports about the courses offered at each school were compared with the information provided at the school level. For the courses offered at Colonial High School, the program specialists reported the needs of students to be met.

Continuous efforts were reported by Colonial High School to improve the course offerings for the students served. These efforts are led by the school administration.

Dr. Phillips High School

Assistant Principal for Instruction/Guidance Counselor interview. At Dr. Phillips High School, the API and guidance counselor reported having fully met the needs of high ability students in the subject areas of agriculture; art; the executive internship program; foreign languages; gifted; literature, language, communications, drama, and humanities; library media; mathematics; music; and technology education/industrial education. They reported partially to fully meeting the needs of high ability students in science, and they reported partially meeting the needs of these students in business education.

The Center for International Studies (CIS) magnet program is located at Dr. Phillips High School. When CIS program was evaluated during the 1990-91 school year, the needs of the students were determined to be partially met. Information provided by the program coordinator indicated that efforts were planned to better meet the needs of CIS students.

Student surveys. The curriculum needs of high ability students were reported to be met by almost all of the Dr. Phillips High School students surveyed. Individual student concerns addressed specifics about how courses could be improved to meet student needs. For Spanish, one student recommended that more time be spent on grammar and that less time be spent on art and culture projects. This student also recommended that less emphasis be given to the interpretation of English literature and more attention be given to grammar and language structure. For Drawing I, one student recommended that a grade book be used in order to more objectively determine student progress; the syllabus was reported to be satisfactory for the course. For Drama II it was recommended that the course be more structured and achievement focused.

When students were asked "Were there high school classes for high ability students that you wanted to take that were not available to you?" one of the ten Dr. Phillips students surveyed indicated "yes." This student reported having a previous interest in taking college algebra and indicated not knowing why it was not offered.

Program specialist interview. The program specialist reports about the courses offered at each school were compared with the information provided at the school level. For the courses offered at Dr. Phillips High School, the program specialists reported the needs of students to be met.

Edgewater High School

Assistant Principal for Instruction/Guidance Counselor interview. At Edgewater High School, the API and guidance counselor reported having fully met the needs of high ability students in the subject areas of art; gifted; literature, language, communications, drama, and humanities; television production; mathematics, science, and social studies. For technology education and the executive internship program, the respondents indicated that the needs of students were almost fully met. The needs of students were reported to be partially met for business education, foreign languages, and music. Agriculture courses and industrial education courses are not offered at Edgewater High School.

The Engineering and Science Technology magnet is located at Edgewater High School. When asked to rate the services offered in the magnet program, the API and guidance counselor indicated that the needs of the students were fully met.

Student surveys. The curriculum needs of high ability students were reported to be met by almost all of the Edgewater High School students surveyed. Individual student concerns addressed specifics about how courses could be improved to meet student needs. For Spanish II and III, one student recommended that greater emphasis be placed on speaking and writing the language. Another student reported that class sizes for the foreign language classes were too large and that teachers spent time in disciplining students who were less committed to learning. This student also reported large class sizes and limited sheet music for chorus and limited supervision for television production.

When students were asked "Were there high school classes for high ability students that you wanted to take that were not available to you?" four of the ten Edgewater students surveyed indicated "yes." Two students reported a previous interest in taking music theory; one student was unaware of why the course was not offered and the other student indicated that the reason might have been because of funding. A third student reported a previous interest in taking AP American government and AP economics and reported he was told it was a districtwide decision not to offer the courses. The fourth student indicated a previous interest in taking AP computer science and indicated not taking the course because of being unaware of the prerequisite course requirements until it was too late.

Program specialist interview. The program specialist reports about the courses offered at each school were compared with the information provided at the school level. For the courses offered at Edgewater High School, the program specialists reported the needs of students to be met.

Continuous efforts were reported by Edgewater High School to improve the course offerings for the students served. For the most part, the identification of a curriculum need at Edgewater High School results in the following process: (a) the curriculum concern is identified at the instructional level; (b) it is brought to the attention of the administration; (c) it is weighed along with other instructional priorities for students; and (d) administrative support is provided to obtain the resources necessary to meet the targeted need.

Evans High School

Assistant Principal for Instruction/Guidance Counselor interview. At Evans High School, the API and guidance counselor reported having fully met the needs of high ability students in the subject areas of the foreign languages; gifted; literature, language, communications, drama, and humanities; music; science; and social studies. The executive internship program was also determined to fully meet the needs of high ability students. The areas of agriculture, art, business education, television production, and mathematics were reported to have partially met the needs of students; the needs of students regarding technology education/industrial education were not met by high ability students at Evans High School.

Student surveys. The curriculum needs of high ability students were reported to be met by almost all of the Evans High School students surveyed. Individual student concerns addressed specifics about how courses could be improved to meet student needs. For Spanish I, a student recommended limiting the repetition and that the teacher should correct the homework in order for students to learn from their errors. Another student reported sometimes feeling good and at other times feeling completely lost in the Algebra I Honors class. For science, a student recommended more lab equipment and lab manuals when large classes are scheduled. This student recommended deemphasizing fund-raising activities in music and the need for more sheet music and equipment. A student from the anatomy and physiology honors class recommended not

placing regular and honors classes in the same classroom for instruction which requires the teacher to teach from two different books. This student indicated that "this is just really confusing for the students and the teacher." Gifted English I and Drama I were reported not to be challenging by one student while another reported the same concern regarding industrial education, television production, and computer science.

When students were asked "Were there high school classes for high ability students that you wanted to take that were not available to you?" two of the nine Evans students surveyed indicated "yes." One student reported a previous interest in taking an accelerated Spanish I class and indicated that it was not available. The other student indicated a previous interest in taking gifted classes other than English, honors geometry, and algebra II. Scheduling conflicts were reported as the reason for not being able to take the classes.

Program specialist interview. The program specialist reports about the courses offered at each school were compared with the information provided at the school level. For the courses offered at Evans High School, the program specialists reported the needs of students to be met.

Jones High School

Assistant Principal for Instruction/Guidance Counselor interview. At Jones High School, the API and guidance counselor reported having fully met the needs of high ability students in the subject areas of art, business education, the executive internship program, foreign languages, and music. In another part of the interview, it was reported that high ability students are not encouraged to enroll in art or music courses. For mathematics, it was determined that the needs of students were partially met. For Agriculture; literature, language, communications, drama and humanities; television production; science; social studies; and technology education/industrial education, it was determined that the needs of students were not met. Gifted and AP courses were not offered at Jones High School. Because there was not enough teacher manpower (i.e., teacher allocations) to offer social studies at Grade 9, students at Jones High School were not eligible for the PRIDE award.

Student surveys. The curriculum needs of high ability students were reported to be met by almost all of the Jones High School students surveyed. Individual student concerns addressed specifics about how courses could be improved to meet student needs. For social studies, in general, one student recommended that teachers work on improving the communication of their knowledge. Another student recommended that less busy work and more discussion be addressed for the African-American History class. For computer science and business education one student reported a concern about the poor quality and limited number of typewriters and the limited number of computers. This student reported that the enrollment had to be limited in the computer class because there were not enough computer work stations. Another student reported his mathematics and science progress had been limited because calculus was not offered at Jones and because there were no science offerings beyond physics.

When students were asked "Were there high school classes for high ability students that you wanted to take that were not available to you?" six of the nine Jones students surveyed indicated "yes." These students listed AP classes in English, science, social studies, and mathematics (3); chemistry II (3); physics II (1); biology II (1); precalculus (1) and calculus (2). The reasons given for not offering the class were that the school did not offer the courses, and therefore, they could not be requested, or that there were not enough students in the class to offer it.

Program specialist interview. The program specialist reports about the courses offered at each school were compared with the information provided at the school level. Program specialists are aware of the limitations in course offerings at Jones High School and two program specialists reported that the offerings at Jones were not meeting the needs of the students served.

Oak Ridge High School

Assistant Principal for Instruction/Guidance Counselor interview. At Oak Ridge High School, the API and guidance counselor reported having fully met the needs of high ability students in the subject areas of agriculture, art, business education, the executive internship program, foreign languages, and mathematics. They reported partially to fully meeting the needs of students in literature, language, communications, drama, humanities, and science; they reported partially meeting the needs of students in gifted education, music, and social studies. When asked about technology education/industrial education and television production, they reported not meeting the needs of high ability students.

Planning efforts to implement MAPP (Meritorious Academic Program for Pioneers) at Oak Ridge were reported. Students involved in MAPP are provided a rigorous course of study; the courses were not found to be integrated to provide an academic continuum. Because MAPP is a relatively new program, the evaluator did not feel that the effectiveness of the program should be evaluated.

Student surveys. The curriculum needs of high ability students were reported to be met by almost all of the Oak Ridge High School students surveyed. Individual student concerns addressed specifics about how courses could be improved to meet student needs. For chemistry II and physics II, one student recommended that when a high interest in taking a course is demonstrated by students that additional classes be added. This student also recommended assessing the adequacy of the library holdings relative to the research needs of the students. Another student recommended purchasing addition tools and materials needed for science classes. Three students reported about social studies classes: one student recommended a stronger focus on content; another recommended that the curriculum include black pioneers, inventors, and other blacks who made historical contributions in American, world, and Florida history; and a third student recommended that teachers monitor their ability to influence students to think like themselves. One student recommended that the English teacher be better prepared for class instruction; that the school consider adding music theory and orchestra to the music curriculum and that the band funds be increased; and that gifted education be better defined in that gifted and honors have become synonymous. For algebra I and II, a student recommended that more time be spent on explaining problems and focusing on student individual needs.

When students were asked "Were there high school classes for high ability students that you wanted to take that were not available to you?" four of the nine Oak Ridge students surveyed indicated "yes." Four students reported having a previous interest in AP physics. While two of the students concluded that the course was not offered at Oak Ridge, and therefore, could not be requested, two reported a possible perception on the part of the administration that there was little interest in the course being offered. One of the four students reported a previous interest in AP chemistry and another reported a previous interest in gifted humanities and gifted history. These two students concluded, as they had earlier, that the courses were not offered at Oak Ridge, and therefore, could not be requested.

Program specialist interview. The program specialist reports about the courses offered at each school were compared with the information provided at the school level. For the courses offered at Oak Ridge High School, the program specialists reported the needs of students to be met.

University High School

Assistant Principal for Instruction/Guidance Counselor interview. At University High School, the API and guidance counselor reported having fully met the needs of high ability students in the subject areas of agriculture; art; literature, language, communications, drama, and humanities; television production; music; social studies; technology education/industrial education; and the executive internship program. For mathematics, the API and guidance counselor assessed the courses as partially to fully meeting the needs of high ability students. They reported partially meeting the needs of high ability students in the areas of business education, foreign languages, and science. For high ability students enrolled in the physical education classes of comprehensive fitness and weight training, the courses were rated as fully meeting student needs. The University High School administration has implemented a systematic means of reviewing course information and revising course and program offerings to meet student needs.

Student surveys. The curriculum needs of high ability students were reported to be met by almost all of the University High School students surveyed. Individual student concerns addressed specifics about how courses could be improved to meet student needs. For music keyboarding, accounting, and Spanish I and II, one student recommended having an accelerated track for students who learn faster. Regarding Spanish, this student questioned how well he was prepared for college instruction. Another student recommended the need to have an accelerated track for students enrolled in economics and American government, and another student recommended that the gifted offerings be "above and beyond the regular academic studies." Regarding French II, one student recommended that the class be more structured and that less "busy work" be assigned. This student made a recommendation regarding AP physics; he advised that the independent study alternative would not adequately prepare a student for the examination. Regarding geometry honors, one student recommended that the teacher move through the curriculum at a slower pace and address ways to make the after-school tutoring program more helpful.

When students were asked "Were there high school classes for high ability students that you wanted to take that were not available to you?" six of the nine University High students surveyed indicated "yes." Four students reported a previous interest in the Valencia Community College dual-enrollment courses, three students specifically cited algebra and trigonometry. The students indicated that lack of funding was the reason that the courses could not be offered. One student reported a previous interest in taking AP physics and implied that the reason for not offering the course might be related to low interest on the part of the students. Another student reported not being able to take humanities because of a scheduling conflict.

Program specialist interview. The program specialist reports about the courses offered at each school were compared with the information provided at the school level. For the courses offered at University High School, the program specialists reported the needs of students to be met.

West Orange High School

Assistant Principal for Instruction/Guidance Counselor interview. At West Orange High School, the API and guidance counselor reported having fully met the needs of high ability students in the subject areas of art, foreign languages, gifted, television production, mathematics, music, science, social studies, and technology education/industrial education. They reported partially to fully meeting the needs of students in agriculture, literature, language, communication, drama, and humanities. The needs of high ability students in business education and the executive internship program were reported to be partially met.

Student surveys. The curriculum needs of high ability students were reported to be met by almost all of the West Orange High School students surveyed. Individual student concerns addressed specifics about how courses could be improved to meet student needs. For AP Literature, three students recommended that writing be emphasized, while one of these students recommended that poetry be a secondary emphasis, and another student recommended that the interpretation of literary works be a secondary emphasis. Two students made recommendations regarding anatomy and physiology honors: efforts should be taken to decrease the class size (44); additional materials should be provided for labs and classes, in general; honors and regular students should be segregated in order for the level of instruction to meet the needs of high ability students. One student recommended that the American government honors teacher be more prepared to comprehensively cover the information in the textbook and to redirect the focus away from busy work. Another student recommended that the AP American history teacher be better prepared to work through problems with students, being less easily frustrated, and that this teacher better prepare students to take the AP examination. Regarding algebra II honors, one student recommended that students be more carefully screened to ensure that they have acquired the prerequisite skills to function successfully in the class. One student recommended that the teacher of computer programming basic I and II read less often from the book, monitor student learning more closely, and provide time to help students who are having trouble. For French II advanced, one student recommended that more time be spent on instruction with an emphasis on speaking the language.

When students were asked "Were there high school classes for high ability students that you wanted to take that were not available to you?" eight of the 12 West Orange students surveyed indicated "yes." Seven students reported a previous interest in AP biology. They indicated that the reasons the course was not offered were that the teacher was concerned that the students would not be able to contend with the rigor of the course and the low numbers of students interested in taking it. One student reported a previous interest in contemporary history, but explained that the course is not taught at an honors or AP level for seniors. This student was interested in taking courses that would result in weighted grades such as the AP and honors courses.

Program specialist interview. The program specialist reports about the courses offered at each school were compared with the information provided at the school level. For the courses offered at West Orange High School, the program specialists reported the needs of students to be met.

Winter Park High School

Assistant Principal for Instruction/Guidance Counselor interview. At Winter Park High School, the API and guidance counselor reported having fully met the needs of high ability students in the subject areas of music, science, and social studies, and in the executive internship program. Areas reported for partially meeting the needs of high

ability students were agriculture; art; business education; foreign languages; gifted; literature, language, communications, drama, and humanities; mathematics; and technology education/industrial education. In the area of television production, it was reported the needs of high ability students were not met.

The International Baccalaureate Program (IB) is located at Winter Park High School. Students involved in IB are provided a rigorous course of study; the courses are integrated and provide an academic continuum. The API and guidance counselor provided information to support that IB is meeting the needs of the high ability students served.

Student surveys. The curriculum needs of high ability students were reported to be met by almost all of the Winter Park High School students surveyed. Individual student concerns addressed specifics about how courses could be improved to meet student needs. For AP biology, one student recommended more lab activities, that is, conducting the activities and writing the results. Another student recommended that the IB Physics course be geared "towards the format of the test" and that the scope of the material be made narrower and more in depth. For AP chemistry, one student recommended that the instruction include efforts to inspire confidence in students. This same student recommended that the math studies II class more closely interface with and prepare students for the mathematics offered at the college level and that the teacher be better prepared to answer student questions. Another student recommended that the algebra II teacher work to inspire confidence in students. This student and another student made the same recommendation for AP calculus (AB) and also recommended that instruction be geared to all students and not just those students with a better grasp of the subject. One student recommended developing additional courses within mathematics, specifically for students who have taken AP calculus (AB) and are not ready or willing to take AP calculus (BC). Regarding foreign languages, one student recommended the following for German I: when a teacher change is necessary in the middle of the year, that efforts be taken by the two teachers to communicate about student progress, teaching methods, etc. in order to avoid losing instructional time in the transition period. For German II, this student recommended spending more time on instruction and less time watching movies. For Russian, two students recommended spending more time on instruction and preparing for the IB examination and spending less time on language club activities. In Theory of Knowledge (TOK), one student recommended that the teacher spend more time on classroom instruction and that the teacher, not the students, take more responsibility for classroom instruction.

When students were asked "Were there high school classes for high ability students that you wanted to take that were not available to you?" three of the 12 Winter Park students surveyed indicated "yes." One student reported a previous interest in IB biology, however, this student indicated not enrolling in the class because there was no preparatory class and that the lack of a preparatory class could have been related to the lack of funding. Another student reported a previous interest in history classes emphasizing one specific country or area, such as African History. This student speculated that the reason for not offering this type of class could have been related to the lack of interest of other students. A third student reported a previous interest in AP music theory and IB music; the reasons for not being able to take the courses were scheduling conflicts and budget problems.

Program specialist interview. The program specialist reports about the courses offered at each school were compared with the information provided at the school level. For the courses offered at Winter Park High School, the program specialists reported the needs of students to be met.

Conclusions

The information provided by program specialists, Assistant Principals for Instruction (APIs), and high ability students was used to develop profiles to determine if the courses and programs for high ability students were meeting the needs of the students served. The profiles were also found to help identify which schools have implemented a systematic means of reviewing course information and revising course and program offerings to meet student needs. Schools which implemented a course/program analysis system were Apopka, Colonial, Edgewater, and University high schools. Schools making progress to implement a course/program analysis system were West Orange and Winter Park high schools. These schools were found to be more fully meeting the needs of high ability students.

Recommendations

1. Efforts should be taken to assist Boone, Dr. Phillips, Evans, Jones, and Oak Ridge high schools in the implementation of a course/program analysis system to plan for meeting the needs of high ability students. The following Assistant Principals for Instruction (APIs) have successfully implemented this type of process: H. Jeanne Moore at Apopka High School, Bonnie King at Colonial High School, Tom Akin at Edgewater High School, and Penny Hirsch at University High School.

2. The results of the AP and honors examinations should be reviewed giving consideration to the recommendations for improvement made by students.

Evaluation Question 3

How are students identified and directed toward programs for high ability students, and what processes take place in the high schools to nurture the recognition of student talents in programs for average students?

Results

Data gathered in the API/guidance counselor interview was used to investigate this question. Questions were asked about how students were identified and how course offerings and programs were advertised and communicated to students. Schools are reported individually in the following.

Apopka. High ability students entering Apopka High School are registered through TAP, the Teachers as Advisors Program. As a part of TAP, faculty members receive training about all of the offerings at Apopka High School and are active recruiters and registrars for the various programs available to students. In addition to the cumulative record reviews, teachers also review the scores achieved on the DRP (Degrees of Reading Power) test administered by the high school. By using the Career Blueprint Program, Apopka High School collaborates with the middle schools, using a process called "Pathways," to provide career direction and course choices for the high school years. A personal review of all progress is repeated at the Grade 11 year through TAP. A pre-honors program is offered each summer to rising Grade 10 students who are recommended by their Grade 9 teachers based on their performance. These students receive special nurturing while taking the pre-honors classes to motivate them and build the positive self-esteem needed to be successful in the more rigorous honors and AP courses.

Boone. At Boone High School new students are identified with the assistance of the middle school teachers. Middle school teachers are asked to refer students who they feel would be successful in high school programs for high ability students. Parents are involved in that a parent meeting is held for students referred. Cumulative records are also reviewed by the guidance department in order to assist in the identification of high ability students. Boone does not actively recruit students to participate in course offerings for high ability students.

Colonial. The identification of high ability students at Colonial High School is a process conducted through TAP, the Teachers as Advisors Program. Presentations about the course offerings at Colonial are presented to Grade 8 teachers at the feeder middle schools. Test scores, past performance, parent approval, and parent involvement are critical elements for participation in the program. Teacher and guidance counselor recommendations are required for students to be admitted to CASP, the Colonial Academic Scholars Program. To introduce parents to CASP, a letter is sent to the parents of Grade 8 student candidates, and parents and students are invited to a curriculum fair. Before students attend their first CASP meeting, parents are invited to participate in a CASP orientation. The school curriculum guide clearly explains the course of study for high ability students.

Dr. Phillips. In order to identify high ability students at Dr. Phillips High School, records of past performance are reviewed. This involves meeting with the feeder middle schools. After reviewing the test scores in the cumulative record, the guidance department reviews the results of the DRP (Degrees of Reading Power) test which is administered to all students upon entering Dr. Phillips High School.

Edgewater. To identify middle school students who would be candidates for the programs for high ability students at Edgewater High School, middle school guidance and grade level team leaders are invited to meet with the Edgewater faculty involved with these programs. After discussing class criteria and characteristics of students who have been successful in these classes, referrals are submitted. Another means of identifying students is to review the cumulative records for test scores including the DRP (Degrees of Reading Power) test administered at the high school. For students involved in the Engineering and Science Technology magnet, screening criteria involve original essays, teacher recommendations, a minimum grade point average, and a minimum level of achievement on previously administered standardized tests. The faculty and administration at Edgewater high school actively recruit interested students to participate in their programs for high ability students.

Evans. Evans High School reported several means of identifying students who would be successful in high school programs for high ability students. Teacher recommendations are the most common source of referrals; teacher recommendations may occur in conjunction with student inquiries, the involvement of the guidance counselors, or because of the interest and requests of parents. Sometimes teachers of the upper level courses may refer a student if the student is brought to their attention by other teachers, parents, or the school administration.

Jones. High ability students at Jones High School are usually identified by teachers. Past performance as recorded in the cumulative record is another source used. Meetings with parent groups, the school advisory committee, the PTA, and visitations at the feeder middle schools are other means used for the identification of high ability students at Jones High School.

Oak Ridge. To identify students who would be successful in classes for high ability students at Oak Ridge High School, a review of student records is conducted. Test scores, students who were listed on the honor roll, and exceptional education staffing records verifying placement in the gifted program were three indicators used to identify high ability students reported in the interview. A breakfast is held in the spring to introduce the middle school administrators and team leaders from the feeder schools to MAPP, the Meritorious Academic Program for Pioneers. Efforts to have Grade 8 teachers refer students are initiated at this meeting. It was reported that a procedure for the identification of high ability students was not well communicated in the past.

University. Students entering University High School are registered by guidance counselors and teachers working through TAP, the Teachers as Advisors Program. The identification of high ability students takes place at this time and includes a review of all past records and referrals from previous teachers. Parents of the identified students are sent a letter inviting their child to participated in the Universal Scholars Program; the letter also invites the parent to participate in a Universal Scholars Program orientation. The Universal Scholars Program requires that students sign an academic and behavioral contract and renew this contract on an annual basis. Students are mentored individually and in small groups by a cadre of 30 teacher mentors who volunteer to participate in the program. Each year, the records of Universal Scholars are reviewed by the mentors and course direction is planned for the succeeding year. At Grade 12, students are provide assistance in applying for college, applying for financial assistance, or developing other plans to assist them in meeting their goals. Parents are involved in all planning activities. The school curriculum guide clearly explains the course of study for high ability students.

West Orange. The placement of a student in classes for high ability students at West Orange High School requires a teacher recommendation. This occurs for students entering in Grade 9 as well as students entering in Grade 12. As students plan their course of study at West Orange, the student and parent are an integral part of the planning process; the principal reported that the parent and student must feel that "they own the schedule." To introduce incoming Grade 9 students to the offerings at West Orange, personalized letters are sent to each student candidate and presentations are made at each of the feeder middle schools. A student forum for high ability students is held during the Grade 11 year. The school curriculum guide clearly explains the course of study for high ability students.

Winter Park. It was reported that at Winter Park High School, students who participate in the more rigorous academic classes are self-directed and usually referred by teachers at the middle school. Students are usually enrolled based on information gathered from a review of test scores, reading scores, and from the courses they were taking in middle school. Letters are sent to prospective student candidates regarding the International Baccalaureate Program. To identify students at the high school level, a referral may be made by a basic program teacher after consultation with a teacher teaching a course for high ability students. Sometimes a trial period is arranged for the student to be able to participate for a limited period of time in the more rigorous academic environment. The curriculum fair and curriculum guide assist in informing students of the core academic and elective courses offered at the school; as a result, some students are self-referred.

Conclusions

Each school reported a process for identifying and directing high ability students to the more rigorous academic course offerings at the high school. Some processes included a continuous means of identifying high ability students through the students' four-year high school career while others focused more on a one-time effort to identify rising Grade 9 students. The more comprehensive programs were reported for Apopka and University high schools. Apopka and University high schools not only reported but were observed to have implemented a comprehensive, school-wide, and continuous effort by the administration, faculty, and staff to identify high ability students.

Recommendations

1. All high schools should be encouraged to implement comprehensive, school-wide, and continuous processes to identify and direct high ability students to the appropriate high school programs.

2. The processes implemented at Apopka and University high schools should be considered as models for school improvement efforts for identifying and directing high ability students.

Evaluation Question 4

How successful are courses for high ability students in preparing students for continued success in these courses?

Results

The student survey was used to gather information to investigate how prepared students felt when entering into a new course for high ability students. The following question was asked in the survey:

> Have the continua of course offerings always prepared you for the next higher offering of the course? To guide you in answering this question, use the following examples: (a) When enrolled in an Advanced Placement class, did you feel that you had acquired the prerequisite skills to be successful in the class? or (b) When enrolled in an Honors III course, did you feel that you had acquired the prerequisite skills from the Honors II course? Yes __ No __ If no, please indicated the course area(s) and which specific courses did not prepare you for the next higher level.

Apopka. Eleven of the twelve Apopka High School students reported that the courses in the various subject areas had prepared them for the next higher offering in the respective area. One student reported that the continuum in art had not provided the necessary prerequisite skills to be successful in the more advanced course.

Boone. Survey results were not returned for Boone High School students.

Colonial. Nine of the ten Colonial High School students reported that the courses in the various subject areas had prepared them for the next higher offering in the respective area. One student reported that the trigonometry and analytical geometry classes did not provide the necessary prerequisite skills for AP calculus.

Edgewater. Nine of the ten Edgewater High School students reported that the courses in the various subject areas had prepared them for the next higher offering in the respective area. One student reported that the continuum followed in English had not provided the necessary prerequisite skills to be successful in the more advanced course. This student referred to having taken English honors I, Gifted English III, and AP English.

Evans. Seven of the nine Evans High School students reported that the courses in the various subject areas had prepared them for the next higher offering in the respective area. One student reported that the curriculum content in honors physics had not provided the necessary prerequisite skills to be successful in AP physics. Another student reported that the English curriculum content "always fell short" in preparing the student for the higher-level course, especially in grammar.

Dr. Phillips. Nine of the ten Dr. Phillips High School students reported that the courses in the various subject areas had prepared them for the next higher offering in the respective area. One student reported that the continuum in Spanish had not provided the necessary prerequisite skills to be successful in the more advanced course.

Jones. Eight of the nine Jones High School students reported that the courses in the various subject areas had prepared them for the next higher offering in the respective area. One student reported that the course content of the sophomore English class did not provide adequate preparation for the English III honors class.

Oak Ridge. Each of the nine Oak Ridge High School students reported that the courses in the various subject areas had prepared them for the next higher offering in the respective area.

University. Each of the nine University High School students reported that the courses in the various subject areas had prepared them for the next higher offering in the respective area.

West Orange. Eleven of the twelve West Orange High School students reported that the courses in various subject areas had prepared them for the next higher offering in the respective area. One student reported that the curriculum content in honors physics had not provided the necessary prerequisite skills to be successful in AP physics.

Winter Park. Nine of the twelve Winter Park High School students reported that the courses in the various subject areas had prepared them for the next higher offering in the respective area. Two students reported that the Russian continuum over the four years did not prepare them for the successive years of instruction or for the IB examination. One student reported that the AP biology had not prepared them for biology in college.

Conclusions

At each of the 10 schools for which surveys were returned, 75% or more of the students reported that the courses in the various subject areas had prepared them for the next higher offering in the respective course of study. Concerns were reported at eight of the 10 schools. For the concerns reported regarding AP or IB courses, the official results from the AP and IB examinations were not yet available, so those data were not used.

Recommendations

1. Efforts should be taken at each school to ensure that courses interface to prepare students for the successive years of instruction in a specific subject area.

2. The AP and IB examination results should be analyzed to address the student concerns reported in this evaluation report.

Evaluation Question 5

What are the concerns of program specialists and school administrators regarding programs for high ability students?

Results

Information from the program specialist interviews and the API/Guidance Counselor interviews were used to investigate this question. Concerns are listed by program and by school.

Program specialists. For the program specialists, questions regarding concerns were followed by questions related to future directions. This information is presented alphabetically by subject area for each program specialist interviewed.

Regarding agriculture, the program specialist voiced a concern about the need to refocus agriculture instruction from farming to environmental research. Courses such as floraculture, tissue culture, and aquaculture were cited as being consistent with this new direction. He recommended developing additional one-half semester courses to assist in the further implementation of these courses.

The program specialist for art education reported that some schools due to facility limitations and lack of equipment and supplies are not able to offer courses for high ability students. In the future, he sees a need to provide some equity throughout the high schools in the areas of facilities, supplies, and equipment.

In the area of business education, the program specialist cited two concerns. The first concern addressed not being able to provide the same courses across the high schools because of equipment restrictions, that is, if a school does not have adequate equipment, then the courses cannot be offered. The second concern addressed the need to provide training using the same technology available in the work world. Replacing typewriters and upgrading computers is a continuous effort, and, according to the program specialist, the gap between the latest technology used in business and what is available in the OCPS classrooms is growing.

The program specialist for the executive internship program reported a concern regarding the need to train individuals to whom students are assigned. She also reported the need to have additional time for providing this training and for monitoring students, especially students with special needs.

The program specialist for library media reported concerns about the television production class and library media services. Regarding television production, she is concerned that the course is usually only open to high ability students when it should be made available to all students who are interested in the course of study. She also recommended that the course of study be further developed. Regarding library media services, she is hoping to develop an interlibrary loan program for all schools to be able to benefit from shared resources; expediting this is a concern.

For the area of mathematics, the program specialist presented three concerns. The first concern addressed providing staff development to upgrade the skills of current teachers. In preparing for this staff development, the program specialist reported the need to develop a teacher guide for each course which would include activities for interdisciplinary integration, to cross reference the state standards and standards established by the mathematics professional organizations with the course curricula, and to provide supplementary materials. The second concern addressed using technology and upgrading existing technology. The third concern address the area of guidance and the need for guidance counselors to become more familiar with the curriculum paths within mathematics.

The program specialist for music reported that in order for a music teacher to teach either of the AP music courses, an AP class would have to be substituted for a band class. Therefore, a class of approximately 75 to 85 students would be discontinued in order to offer a class to approximately 10 to 15 AP-level music students. This has not been feasible except at one high school, Apopka High School. Another concern addressed the need for more midi-labs which have the equivalent state-of-the-art technology as the universities and the training for teachers to use the midi-labs. Midi-labs are used for music synthesis.

Regarding technology education/industrial education, the program specialist reported three concerns. The first concern addressed attracting well trained staff and instructional leaders to work with Orange County students. Providing well equipped labs in which to provide the instructional activities was the second concern. The third concern addressed the need to encourage a strong county-wide belief in the importance of technology education as a program area.

In the area of social studies, the program specialist reported a concern for not being able to provide the same level of support to classroom teachers since the district-wide resource teachers had not been funded for the 1991-92 school year. Another concern addressed the large number and variety of courses offered in social studies; this has an impact on the number of preparations a teacher has and the number of students assigned to a class (i.e., 40-41 students for a basic-level class and 6-10 students for an AP class). The extra time needed to prepare for teaching AP classes was also cited as a concern. Occasionally, teachers are assigned to teach an AP class just prior to the beginning of school; this situation leaves teachers with very little opportunity to prepare for this more rigorous course of instruction.

The program specialist for science cited three concerns. The first concern addressed the need to implement chem-com in each high school. Chem-com is chemistry in the community and focuses on the practical application of chemistry in the work environment. Another concern addressed having to convey so much information and not having students involved enough; he was concerned that without the involvement, students would not internalizing what was taught. The need to integrate science throughout the other disciplines was the third concern.

For the areas of literature, language, communication, drama, and humanities, the program specialist reported the need to balance the content of the curriculum to include metacognitive concepts such as thinking skills and problem solving. Another concern addressed having more students enroll in humanities; however, she recognized that high ability students would be less inclined to enroll in courses, like humanities, which do not yield weighted grades and as a result are not on the "preferred scholars list."

In the area of foreign languages, the program specialist was very specific. He reported a concern about the need to develop the AP language classes at Boone High School. He also addressed the need to provide instruction in more of the uncommon foreign languages such as Chinese, Arabic, and Japanese.

Assistant Principals for Instruction. When asked their concerns about programs for high ability students, the Assistant Principal for Instruction (API) and a guidance counselor from each school reported based on their school resources and the population of students served. Schools are presented in alphabetical order.

The API and guidance counselor at Apopka High School reported the reduced teacher allocation, moving to the six-period school day, the reduced funding for instructional resources, and overcrowding as major concerns. These concerns addressed the needs of the school in general and not just the programs for high ability students.

At Boone High School, the respondents reported concerns about not being able to meet the needs of high ability students. Other concerns addressed the lack of integration in the curriculum, the increase in the size of the student body, and a concern regarding drop outs.

For Colonial, the respondents reported a concern regarding the implementation of a six-period versus a seven-period day, having higher numbers in the classes, and the loss of instructional morale. Relating specifically to programs for high ability students, the API and counselor reported a concern regarding needing to have a large group of students to offer a course; however, they reported a caution about having too large a class which might result in lowering the quality of instruction.

The API and guidance counselor at Dr. Phillips High School reported several concerns. The first concern addressed the need to provide opportunities and support systems to minority groups. In expressing a second concern, the guidance counselor reported that students should feel good about what they are doing and yet high ability students were reported to worry if they were not taking enough AP courses. They seemed to be increasing the pressure on themselves to achieve. The third concern addressed the need to reflect the cultural diversity of the student population in the classes for high ability students. The fourth concern related to "taking risks with kids" meaning that placing some students in the high ability classes is taking a risk -- the school may not score as well on the AP tests -- therefore, it is in the best interest of the school to take only the "top kids." The fifth concern mentioned was the growing number of white males without goals and without ambition. For the sixth concern, the guidance counselor reported the need to create a more caring environment and to help students to recognize their individual worth and the worth of others.

At Edgewater, the major concern presented was the need to build the "other layer" to accommodate pre-AP students. This is contingent on the teacher allocations to provide the pre-AP courses. For the overall effort for high ability students, the school is in need of equipment and staying on the "cutting edge" regarding instructional technology. For counselors, the concern focused on assisting students in locating, applying for, and obtaining scholarships.

For Evans High School, one concern addressed was class size, specifically large classes, and how class size is affected by the teacher allocation. Another concern was the schedule. It was reported that some students encounter schedule conflicts when two high ability courses are offered only once in the day and during the same time. A concern reported by teachers was the need to identify students who can be successful.

Concerns reported for Jones High School were related to teacher allocations and student interest in courses for high ability students. The low teacher allocations have resulted in large classes. In the interview, it was suggested that the number of electives be reduced in order to provide more teachers of required courses and lower class sizes for those classes. Another concern was that the menu of courses offered for high ability students was not comprehensive enough; however, without enough students interested in taking the classes the courses could not be offered. Student interest in taking classes for high ability students was also reported as a concern. If students who are perceived to have lower ability but express interest in the classes were to take them, they might dilute the level of learning while the school would achieve the numbers needed to offer the class. Other students might have the ability but might not see the value of working harder.

At Oak Ridge, the API and guidance counselor reported a concern regarding maintaining the program with less funding. They were concerned about their ability to continue offering courses which are costly; the anatomy course cost the school $2,000. The funds used to provide a differentiated curriculum for gifted students was reported to have been drastically reduced. Another concern reported was the reduction in teacher allocations.

The API and guidance counselor at University High School reported concerns related to the budget cuts and the resulting decreases in teacher allocations. Regarding the programs for high ability students, they were fearful that program offerings for fewer students, such as AP courses, would have to be sacrificed.

When the West Orange High School API and guidance counselor were asked to present their concerns for programs for high ability students, they responded by stating that "cutbacks in allocations would result in an increase in class size." For the high ability student this would mean a reduction in courses offered and "watering down" the course when programs such as the honors and AP classes are combined.

At Winter Park High School, concerns addressed maintaining the integrity of the programs for high ability students while having to face the budget "crunches." This included maintaining the program as the student population increases, facilities become more scarce, and the teacher allocation decreases. For the overall school a concern was expressed regarding the need to develop the whole child and not just the academic component.

Conclusions

The concerns presented by program specialists, APIs, and guidance counselors were directly related to the issue of reduced funding for education. At the district as well as the school level, the interviews reflected forethought and planning regarding how to provide quality instruction and maintain the integrity of all programs given that the funding would be reduced.

Programs and courses for high ability students appear to be more vulnerable than others because schools will not be able to afford to offer these classes unless there is full enrollment, and therefore, the FTE funds generated will have to adequately pay for the course costs. This will affect the magnet courses as well as AP and honors classes.

Recommendations

1. Given the extreme economic limitations impacting all schools, district-wide efforts should be taken to assist and support high schools, individually, in planning and developing high school programs for high ability students.

2. The concerns of program specialists and Assistant Principals for Instruction (APIs) reported in the results section of this document should be used in planning school assistance and support activities.

3. Alternative approaches for offering courses for high ability students should be explored. Interactive Television for Distance Learning should be considered for smaller schools that cannot afford to offer the classes (e.g., AP courses or calculus at Jones High School) or larger schools where the enrollment for the particular class is low (e.g., Arabic at Dr. Phillips High School).

Evaluation Question 6

How have incentives for developing programs for high ability students been utilized by district high schools?

Results

The API/guidance counselor interview was used to investigate this question. Most schools reported the use of monetary incentives for the improvement of high school programs for high ability students. At Dr. Phillips High School funds were provided from the district office for the implementation and maintenance of the Center for International Studies (CIS) and for the development of a math-science block course. Dr. Phillips High School received a Superintendent's Competitive Grant to develop and implement DIGS, Delivering Improved Guidance Services which has benefitted all students.

The development and implementation of the Engineering and Science Technology magnet at Edgewater High School was aided by the district level funds provided. The primary source of funds for developing and implementing programs at Edgewater has been grants awarded to the school. Edgewater High School has developed a highly sophisticated model for the identification of instructional needs; the acquisition of information regarding grants; the organization of human, material, and technological resources to write a grant; and the establishment of information networks to strengthen the likelihood that a grant would be awarded.

At Winter Park High School the International Baccalaureate Program was originally implemented with district-level funds. These funds have continued, but were reported to have decreased in successive years. A self-esteem project and a futures project were reported to have been funded through grants.

District and state funds were provided to Apopka High School for the development and implementation of the Tech-Prep Labs, the Blueprint School Program, and the Teachers as Advisors Program (TAP). Apopka High School is reported to be viewed as a school willing to take risks to implement new programs for special populations and has benefitted from maintaining this posture. District funds were reported to have assisted in the purchase of technology and equipment at Apopka High School.

University High School, the newest school in the district, commenced classes after the initial monetary incentives were awarded from the district level. The respondents at University High School did not report special grant awards for the development and implementation of programs for high ability students; however, they reported a strong interest in implementing a grant-writing process similar to the one reported for Edgewater High School.

The Meritorious Academic Program for Pioneers at Oak Ridge High School was developed with district-level incentive funds. Oak Ridge also reported activities by a few teachers which may develop into a grant-writing process similar to the one at Edgewater High School. The process at Oak Ridge is currently being conducted with limited human resources.

CASP, the Colonial Academic Scholars Program was developed and implemented using district-level incentive funds. With these funds, a teacher is released to be a CASP advisor each period of the school day and ACT and SAT scholarships are provided. Honors certificates are purchased with incentive funds; these certificates are presented to CASP students upon graduation from Colonial High School. Colonial reported grant-writing activities and indicated that several of their submissions have been funded. Although the Colonial process does not appear to be as sophisticated as the process reported at Edgewater, the Assistant Principal for Instruction reported that it is progressing with each grant that is written.

Boone High School reported buying a piano keyboard lab with district-level funds; Jones High School reported that district-level funds were provided for technology needs (e.g., the purchase of computers). At Evans High School district funds were provided to allow teachers to be released from class to attend inservice programs and planning meetings. It was reported that district-level incentive funds were not applied for or received at West Orange High School.

Conclusions

Almost all high schools reported the use of district-level incentive funds to assist in the development and implementation of high school programs for high ability students. Edgewater and Colonial high schools have augmented the incentive funds with grant awards, whereas Oak Ridge and University high schools are very interested in implementing a process for developing and submitting grants. Apopka High School has piloted several state-sponsored projects to continue the incentive to further develop programs which would address the needs of high ability students.

Recommendations

1. Efforts should be taken to assist schools in the acquisition of incentive funds to further develop high school programs for high ability students.

2. Efforts taken at Apopka, Colonial, and Edgewater should be shared and, where appropriate, replicated to assist schools in the acquisition of incentive funds to further develop high school programs for high ability students.

Evaluation Question 7

With the changing demographics of the student population, what modifications or changes will have to take place to address the needs of OCPS high ability students in the future?

Results

Each high school provided a response to this question in the API/guidance counselor interview. These responses reflect different degrees of addressing the problems which may occur as a result of the changing demographics of the student population.

Apopka. At Apopka High School, the concern is related more to rapid growth than it is related to demographic changes. The high school population was reported to be growing so rapidly that a Grade 9 center is needed sooner than the projections forecast, the 1993-94 school year.

Boone. A population increase was also a concern at Boone High School. For Boone, the electives will be reviewed in order to satisfy the numbers of students.

Colonial. At Colonial High School, demographic changes have been addressed by the Principal's Council on Hispanic Students. The work of the council will continue to monitor the population changes, and inservice programs to assist in preparing teachers to work with the changing demographics will continue. Strategies to be implemented to assist with monitoring the progress of students will include interdisciplinary teaming at Grade 9 and the increased use of technology.

Dr. Phillips. Dr. Phillips High School has a high percentage of foreign born and minority students. The concern expressed related to this question addressed increases in student apathy, dysfunctional families, absenteeism, and loss of values. This will result in the need for support groups to work directly with students.

Edgewater. Edgewater High School has been monitoring a predicted increase in the Hispanic population through the increases reported by the feeder middle schools. This may result in the need for more ESOL services.

Another concern reported for Edgewater High School addressed the sizes of basic courses and courses for high ability students. Teachers of courses for high ability students usually have smaller classes and teachers of larger, basic classes become envious. Edgewater is aware of the problem and will continue to explore ways to ameliorate it.

Evans. Evans is concerned about the impact of magnet programs on schools without magnets. It was reported that "as long as magnet schools recruit from schools without magnets, the home schools will have difficulty maintaining enrollment in upper level courses."

Jones. The population at Jones High School was reported to have changed very little racially. There is a current need for a full-time ESOL unit to work with Haitian students.

Oak Ridge. An increase in the number of black and Hispanic students was reported for Oak Ridge High School. Educational implications related to this change were not reported.

University. University High School reported that although the student population is comprised primarily of rural, agrarian lower-income families, the Hispanic and middle to upper-income families are increasing. The course review process implemented at University High School is sensitive to demographic changes, and the curriculum will be modified as needed.

West Orange. West Orange High School reported monitoring the demographic composition of the student population on a regular basis. The demographic composition was reported to be stable; changes were not predicted.

Winter Park. At Winter Park High School, monitoring efforts suggest that more students will have learned English as a second language resulting in teachers having to know how to identify and work with them. This will require inservice. Students were also reported to be increasing in their focus on technology, and schools will be required to address this need.

Conclusions

While most schools are aware of the changing demographics impacting their schools, not all schools have thought through the implications for modification or change that will have to take place to accommodate high ability students or the student population in general.

Recommendations

1. Efforts should be taken to assist schools in monitoring demographic changes in the high school student populations.

2. Assistance should be requested of the Total Quality Management and Strategic Planning Section to develop high school alternative futures related to changing demographics in the student populations and other relevant variables and to plan strategies to address the concerns presented by the alternatives identified.